SCCSID = gen_nodal_dep_struc.man v1.1 02/15/03

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SOUTH FLORIDA WATER MANAGEMENT MODEL V5.0
INPUT MAN PAGE FOR

gen_nodal_dep_struc.dat == This file contains input data for structures simulated in ROUTE subroutine. ROUTE subroutine computes discharges for structures that are dependent on stages at one cell or a group of grid cells. Only structures discharging from areas outside the WCAs (e.g. S-8,S-140A,S-3) are included.
(unit no. 101; read in lok_o_wca_in_struc_dta.F)

NOTE: ALL structures input in this file for simulation must have names input in master list in model definition data file (previously known as lecdef*)

Nomenclature:
STA = Stormwater Treatment Area

COLS	VAR NAME	FORMAT	DESCRIPTION
1. NUMBER OF STRUCTURES SIMULATED IN ROUTE SUBROUTINE			
-	ncalcpt	free	total number of structures simulated in ROUTE subroutine
2. NUMBER OF STRUCTURES WITH SPECIAL CODE AND NAMES FORMAT(i3,2x,30(a6,1x))			
1-5	no_struc_spec_code	i3,2x	number of structures with special code or name is referenced in the model (includes ALL appropriate structures that can be simulated by the model, not just the structures included in any one simulation; any NEW structure with special code added to route.F would have to be added to this list at the end)
	struc_name_spec_code(i)	a6,1x	names of structures with special code

(i= 1, no_struc_spec_code)

NOTE: Records 3 through 15 are repeated for each structure simulated in ROUTE subroutine, i.e., index=1, ncalcpt

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3. INPUT DATA OPTION FOR STRUCTURE
FORMAT(3(a6,1x))

−	struc_name_sim(index)	a6,1x	character id of structure (max 6 characters)
−	add_data_need_opt	a6,1x	option indicating if additional data needs to be input (DATA−need additional data, NODATA−no additional data)
−	cictsta	a6,1x	name of STA flow (NOSTA means that flows are not routed to STA)

NOTE: Records 4 Through 15 are read in only if additional data need to be input for a specific structure, i.e., add_data_need_opt = DATA

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4. CODE OPTION FOR STRUCTURE, DISCHARGE COEFFICIENT AND EXPONENT USED IN DISCHARGE EQUATION

−	icode(index)	free	option for code used (GEN − general code which applies to all GEN structures, or SPC − special code unique to structure)
−	dischg_c(index)	free	discharge coefficient
−	expon(index)	free	exponent used in discharge coefficient
−	type_flow_s(index)	free	option for discharge equation used

GRAV− discharge = dischg_c(index)*(headwater−tailwater)*expon(index)
PUMP− discharge = dischg_c(index)

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5. OPTION FOR HEADWATER

−	ihw_opt(index)	free	option for headwater (1− headwater is a grid cell, otherwise is a canal)

NOTE: Record 6 is read in only if the headwater of the structure is a grid cell, i.e., ihw_opt(index) = 1

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6. LOCATION OF HEADWATER GRID CELL

−	ihw_col(index)	free	column number of grid cell
−	ihw_row(index)	free	row number of grid cell

NOTE: Record 7 is read in only if the headwater of the structure is a canal, i.e., ihw_opt(index) /= 1

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7. HEADWATER CANAL NAME

FORMAT (a5)

-	iup_canal_name(index)	a5	canal name (5 characters)

8. OPTION FOR TAILWATER

-	itw_opt(index)	free	option for tailwater (1 – tailwater is a grid cell, otherwise, a canal)

NOTE: Record 9 is read in only if the tailwater of the structure is a grid cell, i.e., ihw_opt(index) = 1

9. LOCATION OF TAILWATER GRID CELL

-	itw_col(index)	free	column number of grid cell
-	itw_row(index)	free	row number of grid cell

NOTE: Record 10 is read in only if the tailwater of the structure is a canal, i.e., ihw_opt(index) /= 1

10. TAILWATER CANAL NAME
FORMAT (A5)

-	idn_canal_name(index)	a5	canal name (5 characters)

11. BREAKPOINTS IN NODAL STAGES USED IN CALCULATING DISCHARGE

-	n_bkpts	free	number of breakpoints in nodal stages used in calculating discharge
-	stg_bkpt(index,i)	free	breakpoint #i stage (ft NGVD) (i=1,n_bkpts)

12. BREAKPOINTS IN CANAL STAGES USED IN CALCULATING DISCHARGE

-	n_cbkpts	free	number of breakpoints in canal stages used in calculating discharge
-	cstg_bkpt(index,i)	free	breakpoint #i canal stage (ft. NGVD) (i=1,c_bkpts)

13. ADDITIONAL CANALS USED AS TRIGGERS FOR OUTFLOW

-	n_add_can_dep(index)	free	number of additional canals used as triggers for outflow
-	add_can_dep_id(i)	free	names of the canal #i (i=1, n_add_can_dep(index))

14. ADDITIONAL GRID CELL LOCATIONS USED AS TRIGGERS FOR OUTFLOW

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-       n_add_grid_loc(index)   free            number of additional grid cell locations
                                                used as triggers for outflow

NOTE:   The following two fields are repeated for each additional grid cell,
        i.e., i=1, n_add_grid_loc(index)

-       icol_add(i)             free            column number of grid cell #i
-       irow_add(i)             free            row number of grid cell #i
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15. ADDITIONAL STRUCTURES WHOSE OUTFLOW HELP TO DICTATE THE OUTFLOW OF STRUCTURE
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-       n_add_str_dep(index)    free            number of additional structures whose
                                                outflow helps dictate the outflow of
                                                structure
-       add_str_dep_id(i)       free            name of additional structure #i
                                                (i=1, n_add_str_dep(index))
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END OF DESCRIPTION FOR INPUT FILE "gen_nodal_dep_struc.dat"
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